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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/597,571	07/31/2006	Louis Dick	2-5859-001	3019
803	7590	09/22/2008		
STURM & FIX LLP 206 SIXTH AVENUE SUITE 1213 DES MOINES, IA 50309-4076			EXAMINER MALEVIC, DJURA	
			ART UNIT 2884	PAPER NUMBER
			MAIL DATE 09/22/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/597,571	DICK ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	DJURA MALEVIC	2884	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 31 July 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07/31/2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>07/31/2006</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### **Claim Rejections - 35 USC § 112**

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 recites the limitation "said gas electron multiplier". There is insufficient antecedent basis for this limitation in the claim.

### **Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Bellazzini et al. (The micro-groove detector; Nuclear instruments and methods in physics research; A 424 (1999) 444 – 458).

With regards to claim 1, Bellazzini discloses a radiation detector in which primary electrons are released into a gas by ionizing radiation from a radiation source and caused to drift to read-out electrodes, comprising: a matrix or electric field condensing area, each of said condensing areas producing a local electric field gradient sufficient to generate in said gas an electron avalanche from one of said primary electrons so that said gas electron multiplier operates as an amplifier for said primary electron; a position sensitive signal detector comprising read out electrodes to which is applied a tension which is positive relatively to the drifting electrode and wherein said

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matrix of electric field condensing areas and said signal detector are united in a same dual purpose physical structure (2. The micro-groove detector concept).

**Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 3, 5 – 8, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bellazzini in view of Kelleret et al. (Sparks in MSGCs; Nuclear instruments and methods in physics research; A 419 (1998) 382 – 387).

With regards to claims 2 and 3, Bellazzini discloses the claimed invention according to claim 1, however due to the difficulty in viewing figure 1, the specifics of the dual purpose physical structures (i.e., the geometry) is not known. Notice, the physical structure as claimed is well known and conventionally used. Kelleret shows that two sets of parallel electrodes substantially perpendicular to each other is known in order to enhance fast signal propagation (See figures 3 and 4). In view of the utility, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the parallel electrodes substantially perpendicular to each other such as that taught by Kelleret in Bellazzini.

With regards to claim 5, Bellazzini discloses that the electrodes are conductive strips (2. The micro-groove detector concept).

With regards to claim 6, Bellazzini discloses said planes are spaced by spacers in order to mechanically absorb shock (2. The micro-groove detector concept).

With regards to claim 7, Bellazzini discloses the claimed invention according to claim 6, absent some degree of criticality, the recitation that said spacer is made of a polyamide is considered an obvious matter of design choice involving only routine skill in the art. One of ordinary skill in the art would have recognized that polyamides are well suited to absorb mechanical shock and as such would have included polyamide as said spacer.

With regards to claim 8, Bellazzini discloses a spacer comprising glue (2. The micro-groove detector concept).

With regards to claim 12, Kelleret discloses said electrodes made of Tungsten (3. Experimental results).

With regards to claim 13, Bellazzini's radiation detector is mechanically flexible (2. The micro-groove detector concept).

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bellazzini and Kelleret in view of Holzmann et al. (US Patent 5347132).

With regards to claim 4, Bellazzini modified discloses the claimed invention according to claim 2, but fails to expressly disclose at least three sets of longitudinal electrodes forming the superposed planes, specifically where each plane of electrodes are 60 degrees with the direction of the longitudinal electrodes. Kelleret shows that three sets of parallel electrodes 60 degrees with the direction of the longitudinal electrodes to each other is known in order to enhance geometry, i.e., covering a circular

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region (See figures 11 and 17). In view of the utility, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the configuration such as that taught by Holzmann in Bellazzini.

Claims 9 – 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bellazzini and Kelleret in view of Charpak (US Patent 5347131).

With regards to claims 9 - 11, Bellazzini modified discloses the claimed invention according to claim 2, but fails to expressly disclose an electrode mesh comprising conductive and nonconductive wires. Charpak shows an electrode mesh comprising conductive and nonconductive wires is known in order to control mechanical deformations of the electrodes without introducing any bracing or mechanical spacer (Col. 1, Lines 55 -61). In view of the utility, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the electrode mesh configuration such as that taught by Charpak in Bellazzini.

### **Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DJURA MALEVIC whose telephone number is 571.272.5975. The examiner can normally be reached on Monday - Friday between 8:30am and 4:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on 571.272.2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Djura Malevic/  
Examiner, Art Unit 2884  
571.272.5975

/David P. Porta/

Supervisory Patent Examiner, Art Unit 2884